



Missouri Department of dnr.mo.gov

NATURAL RESOURCES

Michael L. Parson, Governor

Carol S. Comer, Director

September 30, 2020

Kurt Dumey
Safety & Environmental Manager
Cane Creek Stone, Inc.
2179 County Road 321
Poplar Bluff, MO 63901

RE: New Source Review Permit - Project Number: 2020-06-021

Dear Kurt Dumey:

Enclosed with this letter is your permit to construct. Please study it carefully and refer to Appendix A for a list of common abbreviations and acronyms used in the permit. Also, note the special conditions on the accompanying pages. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files. Operation in accordance with these conditions and your new source review permit application are necessary for continued compliance. In addition, please note that Cane Creek Stone, Inc. cannot operate with any other plants that have ambient impact limits based on the Air Pollution Control Program's nomographs. Please refer to the permits of any plant that you are operating with to see if their respective permits contain an ambient impact limit. The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

This permit may include requirements with which you may not be familiar. If you would like the department to meet with you to discuss how to understand and satisfy the requirements contained in this permit, an appointment referred to as a Compliance Assistance Visit (CAV) can be set up with you. To request a CAV, please contact your local regional office or fill out an online request. The regional office contact information can be found at the following website: <http://dnr.mo.gov/regions/>. The online CAV request can be found at <http://dnr.mo.gov/cav/compliance.htm>.

If you were adversely affected by this permit decision, you may be entitled to pursue an appeal before the administrative hearing commission pursuant to Sections 621.250 and 643.075.6 RSMo. To appeal, you must file a petition with the administrative hearing commission within thirty days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed; if it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the administrative hearing commission,



Kurt Dumey
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whose contact information is: Administrative Hearing Commission, United States Post Office Building, 131 West High Street, Third Floor, P.O. Box 1557, Jefferson City, Missouri 65102, phone: 573-751-2422, fax: 573-751-5018, website: www.ao.mo.gov/ahc.

If you have any questions regarding this permit, please do not hesitate to contact Dakota Fox at the department's Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM



Susan Heckenkamp
New Source Review Unit Chief

SH:dfa

Enclosures

c: Southeast Regional Office
PAMS File: 2020-06-021

Permit Number:092020-011



MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

MISSOURI AIR CONSERVATION COMMISSION

PERMIT TO CONSTRUCT

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: 092020-011 Project Number: 2020-06-021
Installation ID: 023-0074

Parent Company: Cane Creek Quarry, LLC

Parent Company Address: 2179 County Road 321, Poplar Bluff, MO 63901

Installation Name: Cane Creek Stone, Inc.

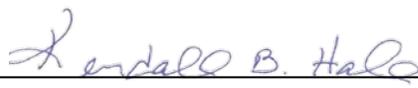
Installation Address: 2179 County Road 321, Poplar Bluff, MO 63901

Location Information: Butler County, S36, T24N, R5E

Application for Authority to Construct was made for:
Installation a new rock crushing process line and rip rap crushing line. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

Standard Conditions (on reverse) are applicable to this permit.

Standard Conditions (on reverse) and Special Conditions are applicable to this permit.



Director or Designee
Department of Natural Resources

September 30, 2020
Effective Date

STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Enforcement and Compliance Section of the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review. In the event that there is a discrepancy between the permit application and this permit, the conditions of this permit shall take precedence. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Enforcement and Compliance Section of the Department's Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant source(s). The information must be made available within 30 days of actual startup. Also, you must notify the Department's regional office responsible for the area within which you are located within 15 days after the actual start up of this (these) air contaminant source(s).

A copy of the permit application and this permit and permit review shall be kept at the installation address and shall be made available to Department's personnel upon request.

You may appeal this permit or any of the listed special conditions to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.075.6 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you choose not to appeal, this certificate, the project review and your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant source(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit using the contact information below.

Contact Information:
Missouri Department of Natural Resources
Air Pollution Control Program
P.O. Box 176
Jefferson City, MO 65102-0176
(573) 751-4817

The regional office information can be found at the following website:
<http://dnr.mo.gov/regions/>

SITE SPECIFIC SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (3)(E). "Conditions required by permitting authority."

1. **Best Management Practices Requirement**
Cane Creek Stone, Inc. shall control fugitive emissions from all of the haul roads and vehicular activity areas at this site by performing BMPs as defined in Attachment AA.
2. **Annual Emission Limit**
 - A. Cane Creek Stone, Inc. shall emit less than 15.0 tons of PM₁₀ in any consecutive 12-month rolling period from the equipment listed in Table 1 in the project description. Cane Creek Stone, Inc shall include all actual emissions in the limit including SSM emissions as well as any excess emissions as reported to the Air Pollution Control Program's Compliance/Enforcement Section in accordance with the requirements of 10 CSR 10-6.050 *Start-Up, Shutdown, and Malfunction Conditions*.
 - B. Cane Creek Stone, Inc. shall demonstrate compliance with Special Condition 2.A using Attachment A or another equivalent form that has been approved by the Air Pollution Control Program, including an electronic form.
3. **Moisture Content Testing Requirement**
 - A. Cane Creek Stone, Inc. shall verify that the moisture content of the processed rock is greater than or equal to 1.5 percent by weight.
 - B. Testing shall be conducted according to the method prescribed by the American Society for Testing Materials (ASTM) D-2216, C-566 or another method approved by the Director.
 - C. The initial test shall be conducted no later than 45 days after the start of operation. A second test shall be performed the calendar year following the initial test during the months of July or August.
 - D. The test samples shall be taken from rock that has been processed by the plant or from each source of aggregate (e.g. quarry).
 - E. The written analytical report shall include the raw data and moisture content of each sample, the test date and the original signature of the individual performing the test. The report shall be filed on-site or at the Cane Creek Stone, Inc. main office within 30 days of completion of the required test.
 - F. If the moisture content of either of the two tests is less than the moisture content in Special Condition 3.A, another test may be performed within 15 days of the

SITE SPECIFIC SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

noncompliant test. If the results of that test is less than the moisture content in Special Condition 3.A, Cane Creek Stone, Inc. shall either:

- 1) Apply for a new permit to account for the revised information, or
- 2) Submit a plan for the installation of wet spray devices to the Compliance/Enforcement Section of the Air Pollution Control Program within 10 days of the second noncompliant test. Plans may be sent by mail to P.O. Box 176, Jefferson City, MO 65102 or by email at aircompliancereporting@dnr.mo.gov. The wet spray devices shall be installed and operational within 40 days of the second noncompliant test.

G. In lieu of testing, Cane Creek Stone, Inc. may obtain test results that demonstrate compliance with the moisture content in Special Condition 3.A from the supplier of the aggregate.

4. Primary Equipment Requirement

Cane Creek Stone, Inc. shall process all rock being processed in the new rock crushing line through the secondary crusher (EU-43). Bypassing the primary crusher for this process is prohibited.

5. Fuel Requirement – Engine

A. Cane Creek Stone, Inc. shall burn exclusively ultra-low sulfur diesel fuel in the rip rap plant generator (EU-53) with a sulfur content less than or equal to 15 parts per million by weight (0.0015 percent by weight).

B. Cane Creek Stone Inc. shall demonstrate compliance with Special Condition 5.A by maintaining records of the fuel's sulfur content from the vendor for each shipment of fuel received or by testing each shipment of fuel for the sulfur content in accordance with the method described in 10 CSR 10-6.40 Reference Methods.

6. Record Keeping Requirement

Cane Creek Stone, Inc. shall maintain all records required by this permit for not less than five years and make them available to any Missouri Department of Natural Resources' personnel upon request.

7. Reporting Requirement

Cane Creek Stone, Inc. shall report to the Air Pollution Control Program, Compliance / Enforcement Section by mail to P.O. Box 176, Jefferson City, MO 65102 or by email at AirComplianceReporting@dnr.mo.gov, no later than 10 days after any exceedances of the limitations imposed by this permit.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (5) REVIEW

Project Number: 2020-06-021
Installation ID Number: 023-0074
Permit Number: 092020-011

Cane Creek Stone, Inc.:
2179 County Road 321
Poplar Bluff, MO 63901

Complete: June 15, 2020

Parent Company:
Cane Creek Quarry, LLC
2179 County Road 321
Poplar Bluff, MO 63901

Butler County, S36, T24N, R5E

PROJECT DESCRIPTION

Cane Creek Stone is an existing limestone quarry operation located at 2179 County Road 321 near Poplar Bluff in Butler County, Missouri. They will be adding a new rock crushing line and rip rap crushing plant.

Cane Creek Stone will transfer limestone to a new KPI-JCI Model 3055 jaw crusher that will be rated at 700 tph. However, the entire process line will be bottlenecked to 500 tph by the downstream JCI Model K400 secondary crusher. Limestone will be transferred from crusher to crusher by conveyors. Both crushers are equipped with screens and powered by line power. This line will replace much of the existing equipment already in use on site, but at the time of writing this permit, Cane Creek Stone is unsure of specifically which pieces of equipment will be decommissioned. Therefore, all existing lines will continue to run in addition to the new equipment and no reductions in production emissions were accounted for in the calculations.

The new rip rap crushing portion of the facility will consist of a Peerless Model 6021 rip rap crusher fit with a grizzly feeder and side conveyor. The rip rap crusher will be able to operate at rates up to 350 tph. The crusher set up will also consist of an internal 100 hp diesel engine.

The applicant is using one of the methods described in Attachment AA, "Best Management Practices," to control emissions from haul roads and vehicular activity areas.

This installation is located in Butler County, an attainment area for all criteria pollutants.

This installation is not on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2. The installation's major source level is 250 tons per year and fugitive emissions are not counted toward major source applicability.

Table 1: Project Emission Unit Summary

Emission Unit No.	Description	Bottlenecked MHDR (tph)
EU-37	Unload to Feeder Box	500
EU-38	Jaw Crusher	500
EU-39	Jaw Crusher Underconveyor	500
EU-40	Scalping Screen	500
EU-41	Scalping Screen Underconveyor & 2 Side Conveyors	500
EU-42	Scalping Screen Feed Conveyor	500
EU-43	Secondary Crusher	500
EU-44	Finish Screen	500
EU-45	Finish Screen Underconveyor & 2 side conveyors	500
EU-46	Secondary Crusher Feed Conveyor	500
EU-47	Four Stacking Conveyors for the scalping screen	500 / conveyor
EU-48	Four Stacking Conveyors for the finish screen	500 / conveyor
EU-49	Rip Rap Plant	350
EU-50	Rip Rap Plant Side Conveyor	350
EU-51	Rip Rap Plant Feeder	350
EU-52	Rip Rap Plant Material Discharge Shoots	350
EU-53	Rip Rap Generator	99 hp
EU-25	Haul Road from Pit	2.84 VMT
EU-27	Haul Road for Shipping	8.94 VMT

TABLES

The following permits have been issued to Cane Creek Stone, Inc. from the Air Pollution Control Program.

Table 2: Permit History

Permit Number	Description
022017-001A	New Engines, Screens, Conveyors, and Screening Plant
022017-001	Additional Crusher and Associated Equipment
042015-003	Rock Quarry

The table below summarizes the emissions of this project. The existing actual emissions were taken from the previous year's EIQ. The potential emissions of the application represent the emissions of all equipment and activities resulting from the new project equipment assuming continuous operation (8760 hours per year). The project conditioned potential emissions include emissions from sources that will limit their production to ensure compliance with the annual emission limit and account for a

voluntary annual PM₁₀ emission limit of 15.0 tons per year for the newly permitted equipment in order to avoid modeling. Facility conditioned potential emissions included plant-wide emissions and two separate 15.0 ton per year emission limits for PM₁₀.

Table 3: Emissions Summary (tons per year)

Air Pollutant	De Minimis Level/SMAL	^a Existing Conditioned Potential Emissions	Existing Actual Emissions (2019 EIQ)	^b Potential Emissions of the Application	Project Conditioned Potential Emissions	Facility Conditioned Potential Emissions
PM	25.0	43.2	N/D	228.71	41.11	84.31
PM ₁₀	15.0	< 15.00	3.84	83.45	< 15.0	< 30.0 ^c
PM _{2.5}	10.0	4.2	1.00	17.24	3.10	7.30
SO _x	40.0	0.1	N/A	4.6 x 10 ⁻³	8.2 x 10 ⁻⁴	0.10
NO _x	40.0	20.7	N/A	13.06	2.35	23.05
VOC	40.0	2.9	N/A	1.07	0.19	3.09
CO	100.0	29.9	N/A	2.81	0.51	30.41
GHG (CO ₂ e)	N/A	5737.1	N/D	487.39	87.60	5,824.70
GHG (mass)	N/A	5756.3	N/D	485.75	87.31	5,843.61
Total HAPs	25.0	0.14	N/A	1.1 x 10 ⁻²	2.1 x 10 ⁻³	0.14

N/A = Not Applicable; N/D = Not Determined

^aFrom Previous permit #022017-001A

^bIncludes site specific haul road and storage pile emissions

^cA second 15.0 tpy limit on PM₁₀ was established in permit #0222017-001A.

EMISSIONS CALCULATIONS

Emissions for the project were calculated as described below and using emission factors found in the United States EPA document AP-42 *Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources*, Fifth Edition (AP-42).

Emissions from the rock-crushing equipment:

- Calculated using emission factors from AP-42 Section 11.19.2 “Crushed Stone Processing and Pulverized Mineral Processing,” August 2004.
- The controlled emission factors were used because the inherent moisture content of the crushed rock is greater than 1.5 % by weight.

Emissions from the diesel generators:

- Calculated using emission factors from AP-42 Section 3.3 Gasoline and Diesel Industrial Engines,” October 1996.

Emissions from haul roads and vehicular activity areas:

- Calculated using the predictive equation from AP-42 Section 13.2.2 “Unpaved Roads,” November 2006.
- A 90% control efficiency for PM and PM₁₀ and a 74% control efficiency for PM_{2.5} were applied to the emission calculations for the use of BMPs.

Emissions from storage piles:

- Load-in and load-out of storage piles were calculated using the predictive equation from AP-42 Section 13.2.4 "Aggregate Handling and Storage Piles," November 2006.
- The moisture content of the aggregate is 1.5% by weight.
- Emissions from wind erosion of storage piles were calculated using an equation found in the Air Pollution Control Program's Emissions Inventory Questionnaire Form 2.8 "Storage Pile Worksheet."

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of PM₁₀ are conditioned to de minimis levels. Potential emissions of PM are above de minimis levels, but below major levels.

APPLICABLE REQUIREMENTS

Cane Creek Stone, Inc. shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved.

GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110.
- No Operating Permit is required for this installation.
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.220
- *Restriction of Emission of Odors*, 10 CSR 10-6.165

SPECIFIC REQUIREMENTS

- *Restriction of Emission of Particulate Matter From Industrial Processes*, 10 CSR 10-6.400

- 40 CFR 60 Subpart OOO, "Standards of Performance for Nonmetallic Mineral Processing Plants" applies to the equipment.
- 40 CFR Part 60, Subpart IIII, "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines" applies to EU-53
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40 CFR Part 63, Subpart ZZZZ, "National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines" applies to EU-53

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, it is recommended that this permit be granted with special conditions.

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated June 10, 2020, received June 15, 2020, designating Cane Creek Quarry, LLC as the owner and operator of the installation.

Attachment AA: Best Management Practices

Haul roads and vehicular activity areas shall be maintained in accordance with at least one of the following options when the plant is operating.

1. Pavement
 - A. The operator shall pave the area with materials such as asphalt, concrete or other materials approved by the Air Pollution Control Program. The pavement will be applied in accordance with industry standards to achieve control of fugitive emissions while the plant is operating.
 - B. Maintenance and repair of the road surface will be conducted as necessary to ensure that the physical integrity of the pavement is adequate to achieve control of fugitive emissions from these areas while the plant is operating.
 - C. The operator shall periodically wash or otherwise clean all of the paved portions of the haul roads as necessary to achieve control of fugitive emissions from these areas while the plant is operating.

2. Application of Chemical Dust Suppressants
 - A. The operator shall apply a chemical dust suppressant (such as magnesium chloride, calcium chloride, lignosulfonates, etc.) to unpaved areas.
 - B. The quantities of the chemical dust suppressant shall be applied and maintained in accordance with the manufacturer's recommendation (if available) and in sufficient quantities to achieve control of fugitive emissions from these areas while the plant is operating.
 - C. The operator shall record the time, date and the amount of material applied for each application of the chemical dust suppressant agent on the above areas. The operator shall keep these records with the plant for not less than five (5) years and make these records available to Department of Natural Resources' personnel upon request.

3. Application of Water-Documented Daily
 - A. The operator shall apply water to unpaved areas. Water shall be applied at a rate of 100 gallons per day per 1,000 square feet of unpaved or untreated surface area while the plant is operating.
 - B. Precipitation may be substituted for watering if the precipitation is greater than one quarter of one inch and is sufficient to control fugitive emissions.
 - C. Watering may also be suspended when the ground is frozen, during periods of freezing conditions when watering would be inadvisable for traffic safety reasons, or when there will be no traffic on the roads.
 - D. The operator shall record the date, volume of water application and total surface area of active haul roads or the amount of precipitation that day. The operators shall also record the rationale for not watering (e.g. freezing conditions or not operating).
 - E. The operator shall keep these records with the plant for not less than five (5) years, and the operator shall make these records available to Department of Natural Resources' personnel upon request.

APPENDIX A

Abbreviations and Acronyms

% percent	MMBtuMillion British thermal units
°F degrees Fahrenheit	MMCFmillion cubic feet
acfm actual cubic feet per minute	MSDSMaterial Safety Data Sheet
BACT Best Available Control Technology	NAAQSNational Ambient Air Quality Standards
BMPs Best Management Practices	NESHAPs ..National Emissions Standards for Hazardous Air Pollutants
Btu British thermal unit	NO_xnitrogen oxides
CAM Compliance Assurance Monitoring	NSPSNew Source Performance Standards
CAS Chemical Abstracts Service	NSRNew Source Review
CEMS Continuous Emission Monitor System	PMparticulate matter
CFR Code of Federal Regulations	PM_{2.5}particulate matter less than 2.5 microns in aerodynamic diameter
CO carbon monoxide	PM₁₀particulate matter less than 10 microns in aerodynamic diameter
CO₂ carbon dioxide	ppmparts per million
CO_{2e} carbon dioxide equivalent	PSD Prevention of Significant Deterioration
COMS Continuous Opacity Monitoring System	PTEpotential to emit
CSR Code of State Regulations	RACTReasonable Available Control Technology
dscf dry standard cubic feet	RALRisk Assessment Level
EQ Emission Inventory Questionnaire	SCCSource Classification Code
EP Emission Point	scfmstandard cubic feet per minute
EPA Environmental Protection Agency	SDSSafety Data Sheet
EU Emission Unit	SICStandard Industrial Classification
fps feet per second	SIPState Implementation Plan
ft feet	SMALScreening Model Action Levels
GACT Generally Available Control Technology	SO_xsulfur oxides
GHG Greenhouse Gas	SO₂sulfur dioxide
gpm gallons per minute	SSMstartup, shutdown, & malfunction
gr grains	tphtons per hour
GWP Global Warming Potential	tpytons per year
HAP Hazardous Air Pollutant	VMT vehicle miles traveled
hr hour	VOC Volatile Organic Compound
hp horsepower	
lb pound	
lbs/hr pounds per hour	
MACT Maximum Achievable Control Technology	
µg/m³ micrograms per cubic meter	
m/s meters per second	
Mgal 1,000 gallons	
MW megawatt	
MHDR maximum hourly design rate	